No. II.

PRESERVING IRON FROM RUST.

The Thanks of the Society were voted to Mr. E. WHITESIDES, of No. 14 Bateman's Buildings, Soho, for his Method of Preserving Iron from Rust.

14 *Bateman's Buildings, Soho,*
SIR, *February* 9, 1841.

I HAVE sent you a method of preserving iron from rust, which I am desirous of laying before the Society.

I am, Sir, &c. &c.
To the Secretary of the Society of Arts. E. WHITESIDES.

The method adopted by Mr. Whitesides of preserving iron from rust may be explained in a few words. The iron is heated to redness, just perceptible in the dark, and then quenched in tallow.

In order to test the value of Mr. Whitesides' method, Mr. Binyon undertook to make experiments with iron hinges, one of which had been prepared according to Mr. Whiteside's plan, and fixed on a door of Mr. Binyon's premises, within twenty inches of the tiling, and when examined two months after being fixed, appeared to be tolerably clean, whereas an unprepared hinge, fixed at thirty-six inches from the top of the door, after the same lapse of time was considerably rusted. A third hinge, which had been prepared by Mr. Whitesides' process, was fixed at twenty inches from the ground, and was found, at the expiration of two months, to be less free

from rust than that near the roof, but considerably cleaner than the unprepared hinge.

It is to be observed, that little rain had fallen during the time of trial.

No. III.

TITANIUM FOUND IN THE BUTTERLEY IRON-WORKS.

The Thanks of the Society were voted to JOSEPH GLYNN, *Esq. F.R.S. for his Communication on Titanium found in the Blast-furnaces at the Butterley Iron-works; Specimens of which have been placed in the Society's Repository.*

Butterley Iron-Works, by Alfreton, Derbyshire, March 2, 1842.

SIR,

I SEND you herewith some specimens of Titanium mixed with iron, which were found in the hearth or bottom of a blast-furnace belonging to the Butterley Company, which was lately blown out, that is to say, extinguished for repairing. The hearth or cavity at the bottom of the furnace is composed of large blocks of grit-stone, of nearly pure silex, of small grain, which are found partially vitrified and rent in pieces by the heat to which they have been exposed.

The Butterley Company have six of these furnaces; they are about forty feet in height, fifteen feet inside diameter at the largest part, and each furnace produces weekly from seventy to eighty tons of best melting iron, or "No. 1 Pig."

The quantity of iron-stone is nearly three tons for